

1/20

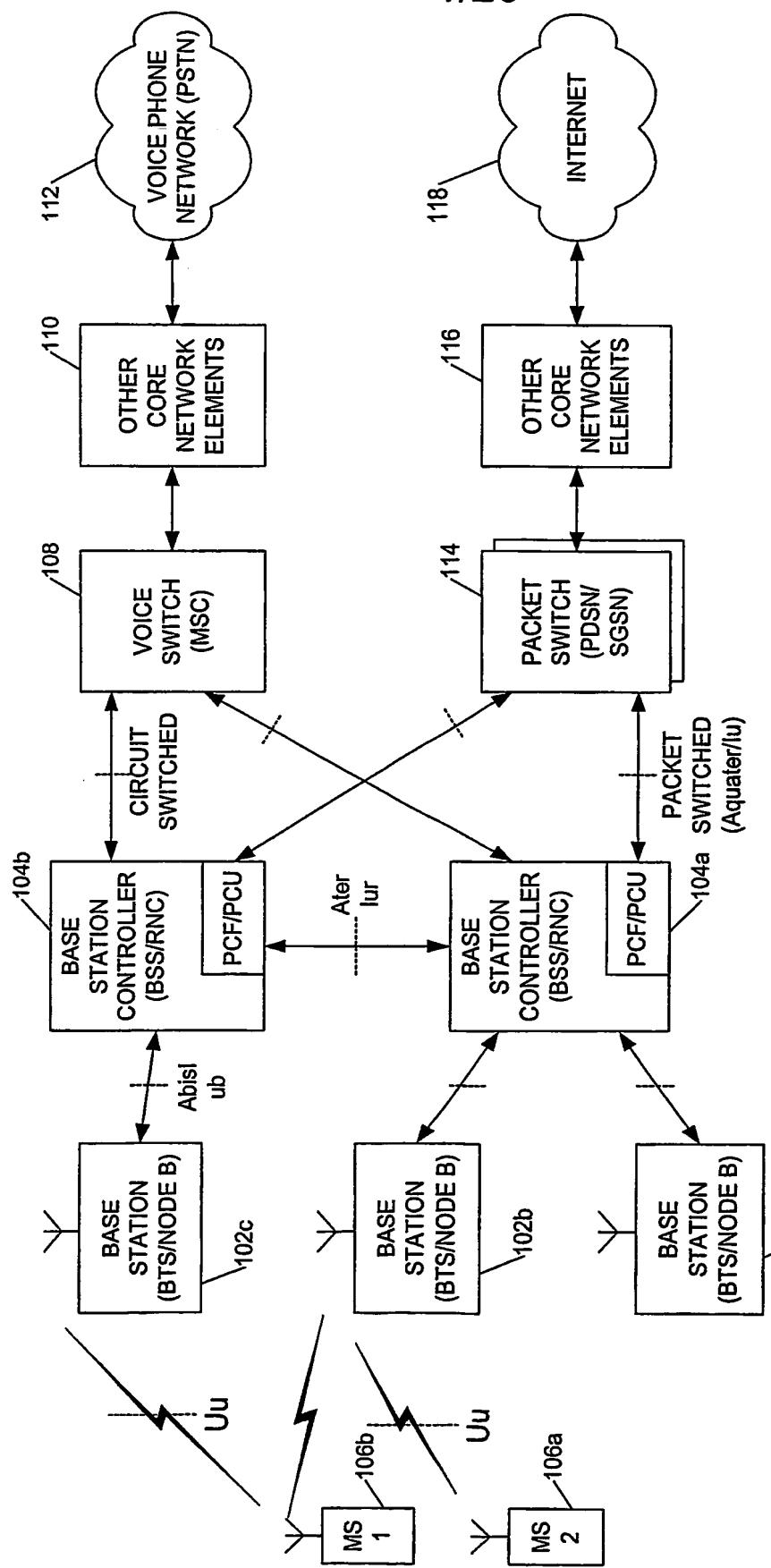


Figure 1

2/20

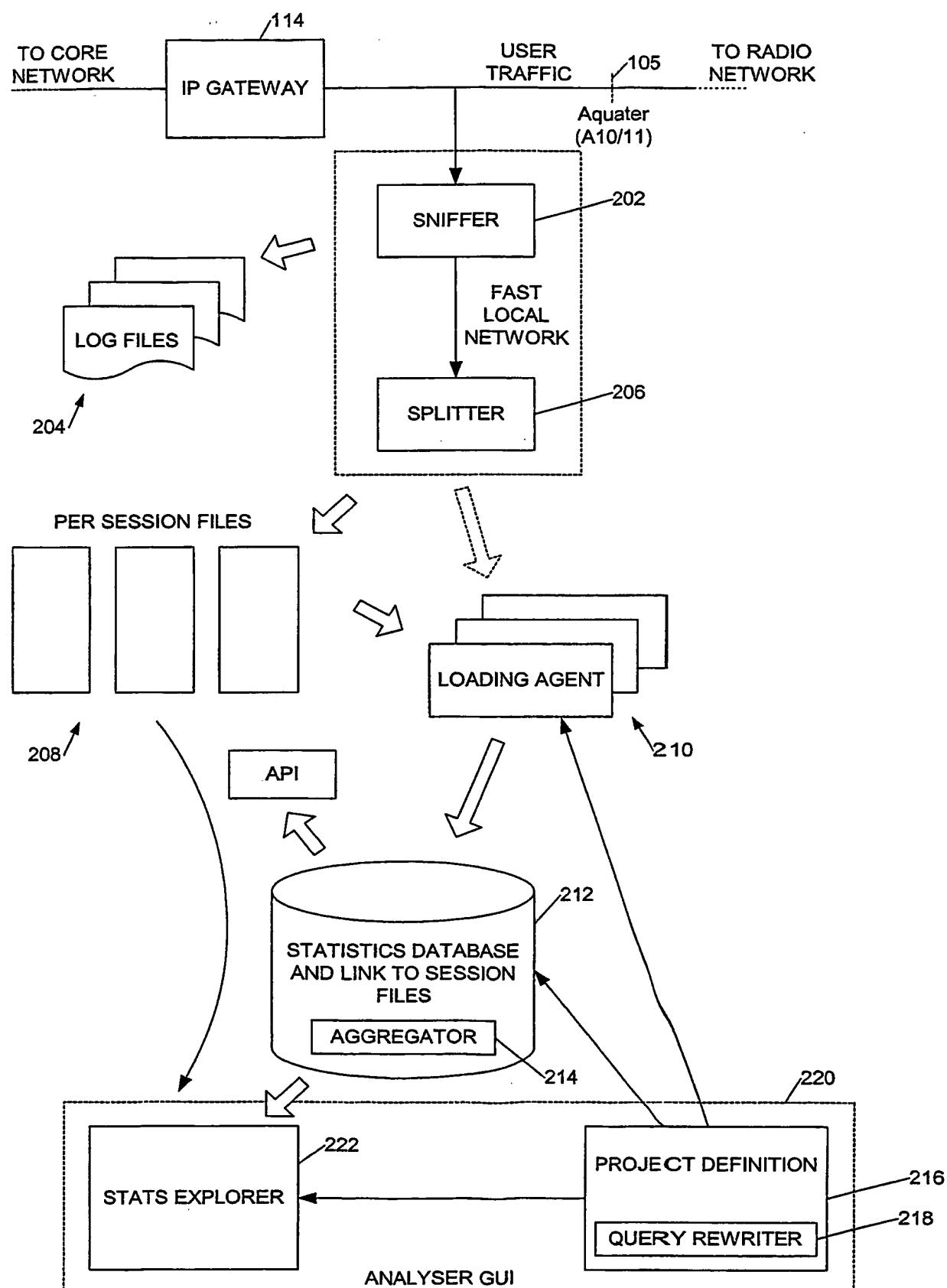


Figure 2

3/20

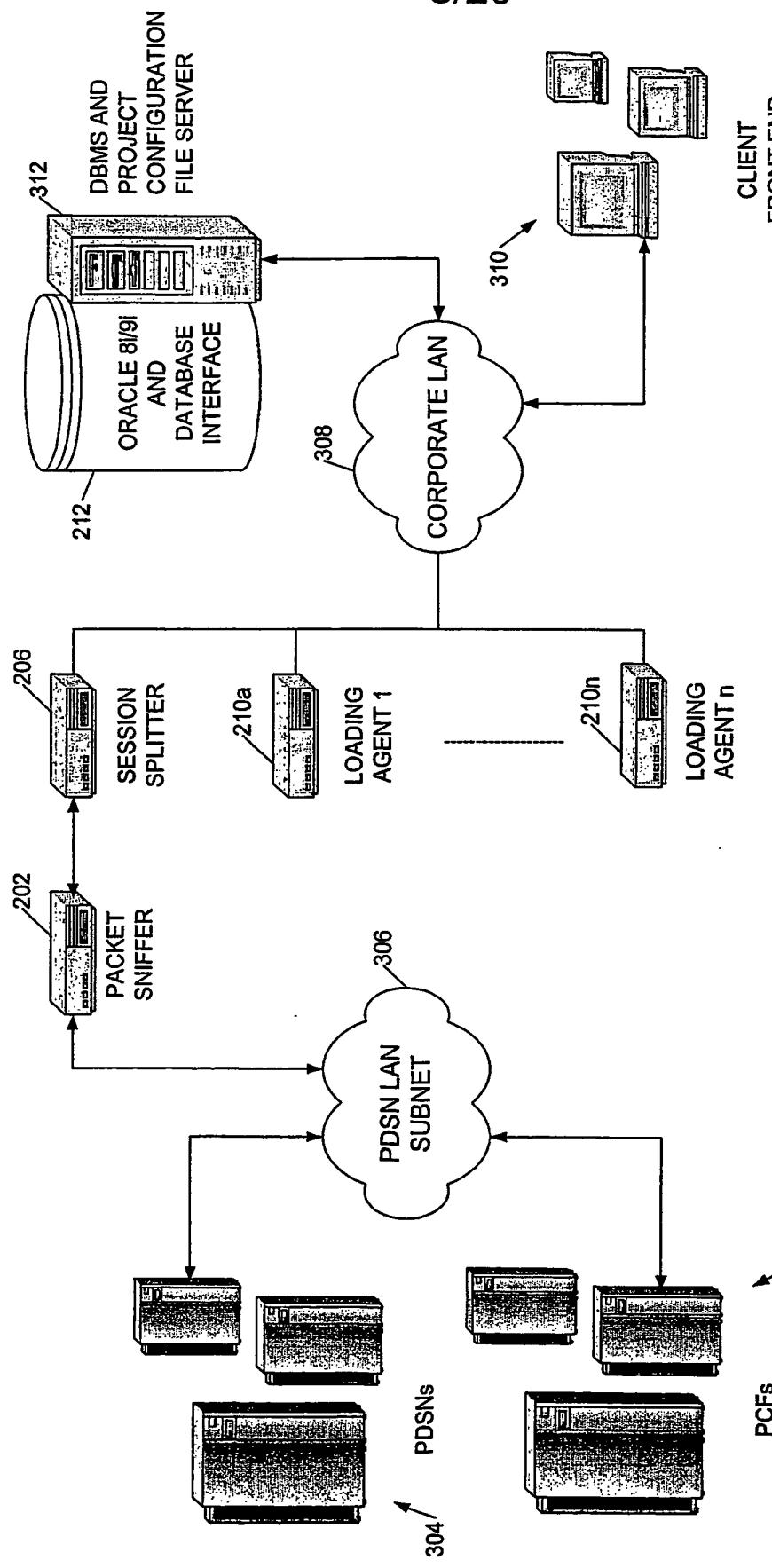


Figure 3

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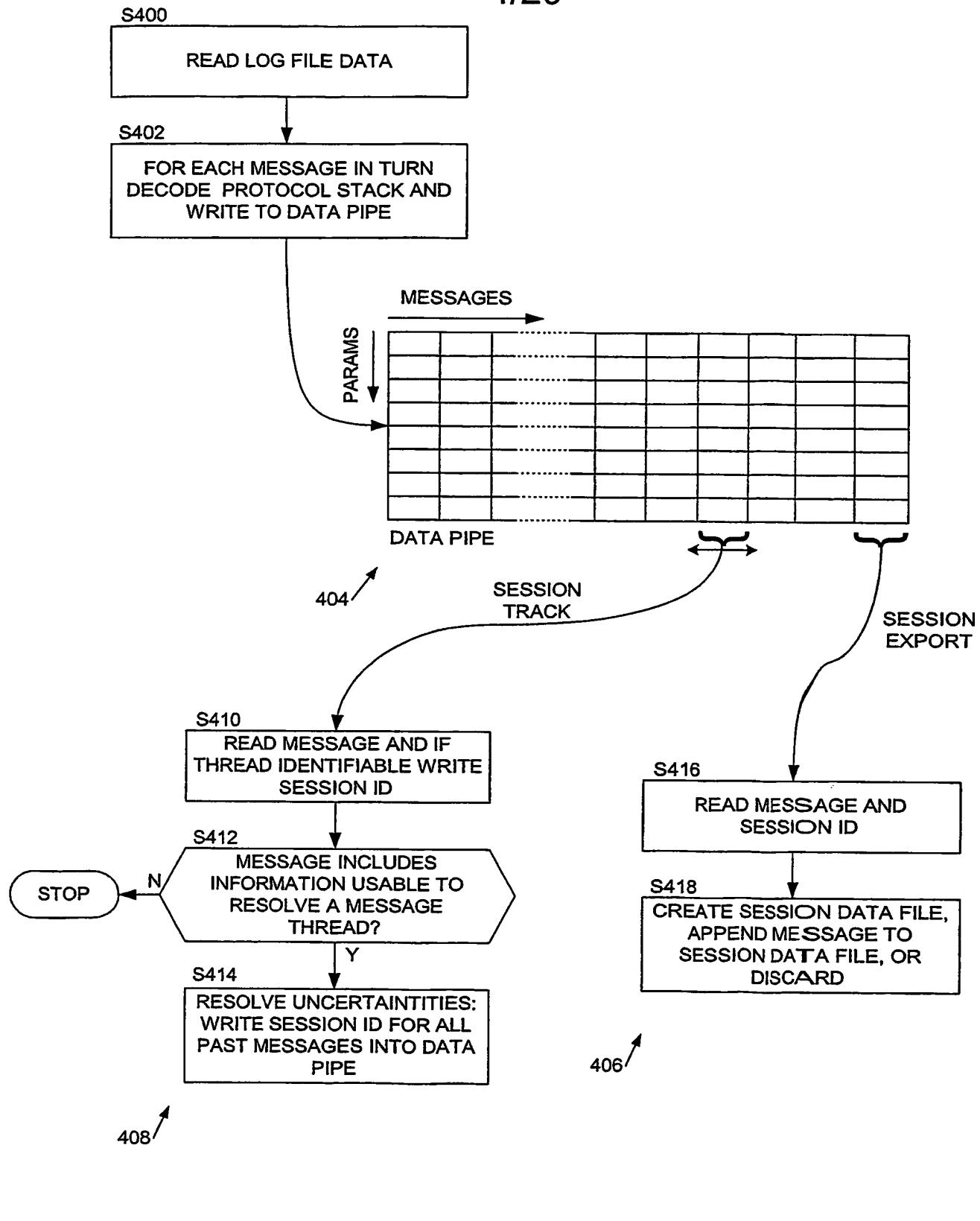


Figure 4

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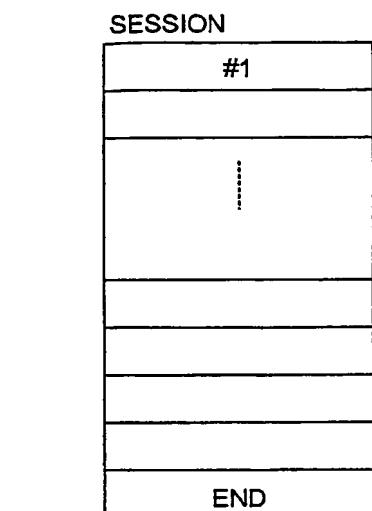
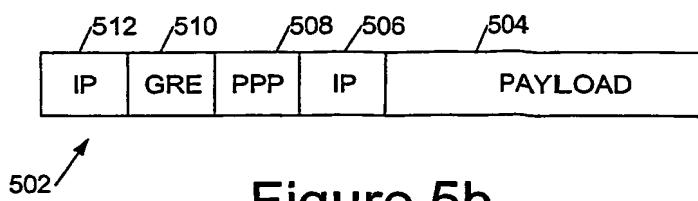


Figure 5a



502

Figure 5b

DIM 1	DIM 2	STAT 1	STAT 2	STAT N
1	1			
1	2			
1	3			
2	1			
2	2			
2	3			

S514

LOADING AGENT READS SESSION DATA FILE

S516

FOR EACH MESSAGE IN TURN
DECODE PROTOCOL STACK AND
WRITE TO DATA PIPE

Figure 5e

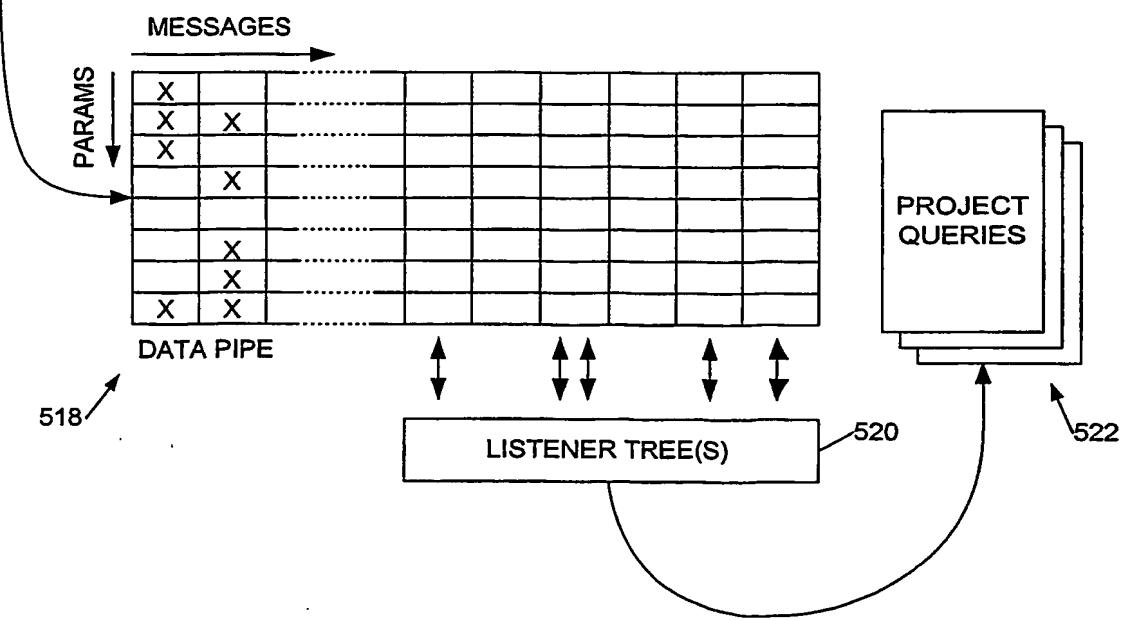


Figure 5c

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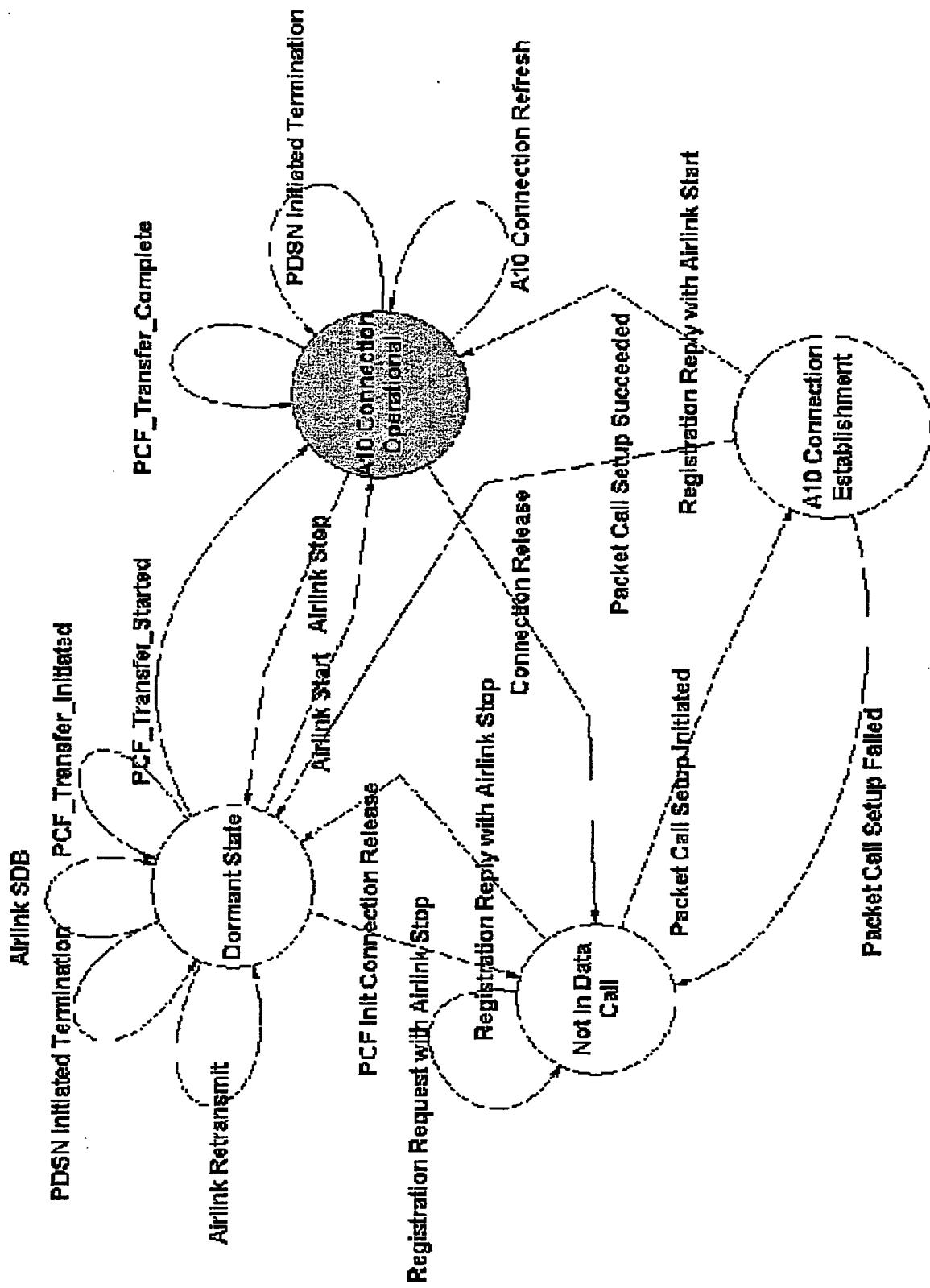


Figure 5d

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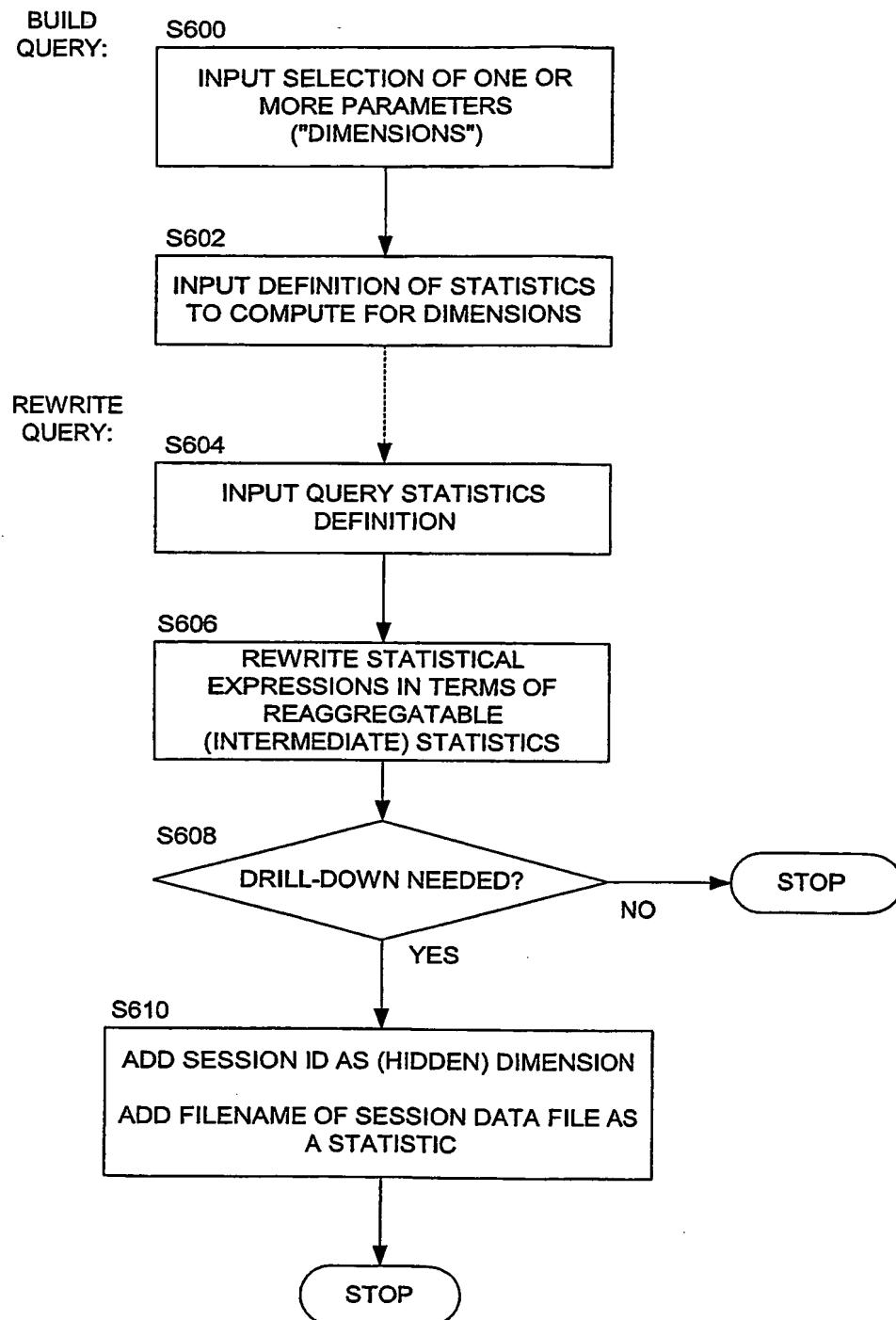


Figure 6

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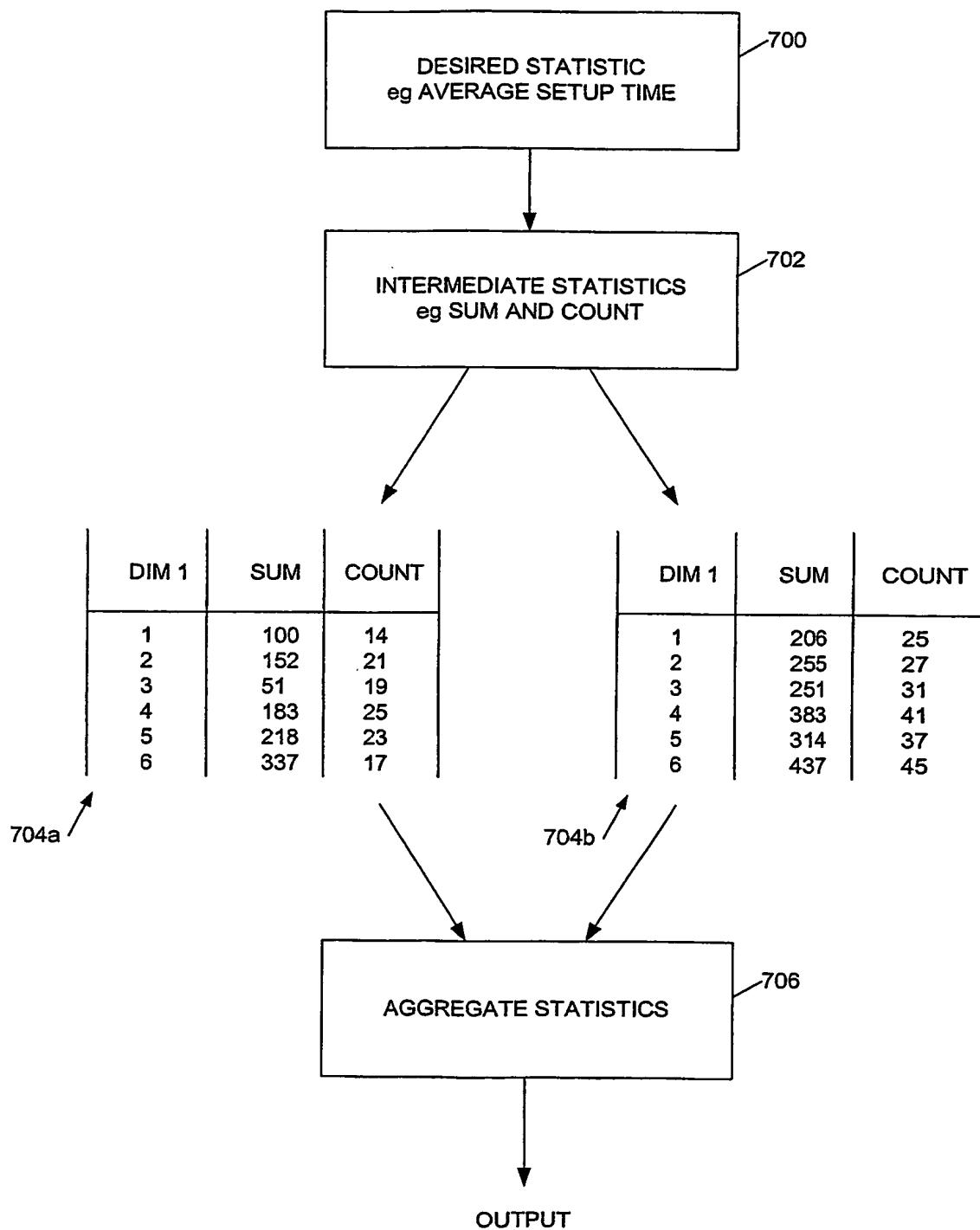


Figure 7

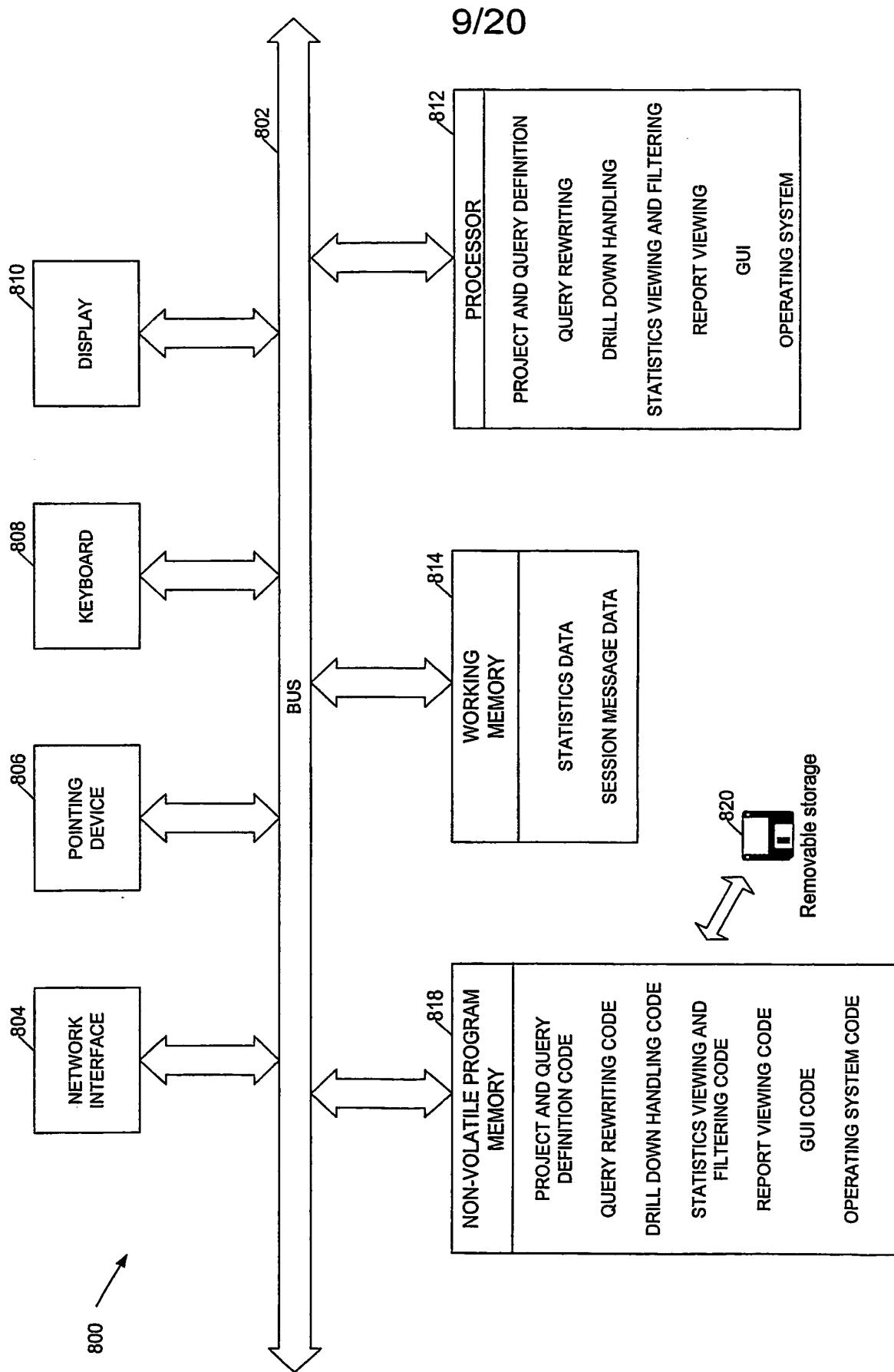


Figure 8

10/20

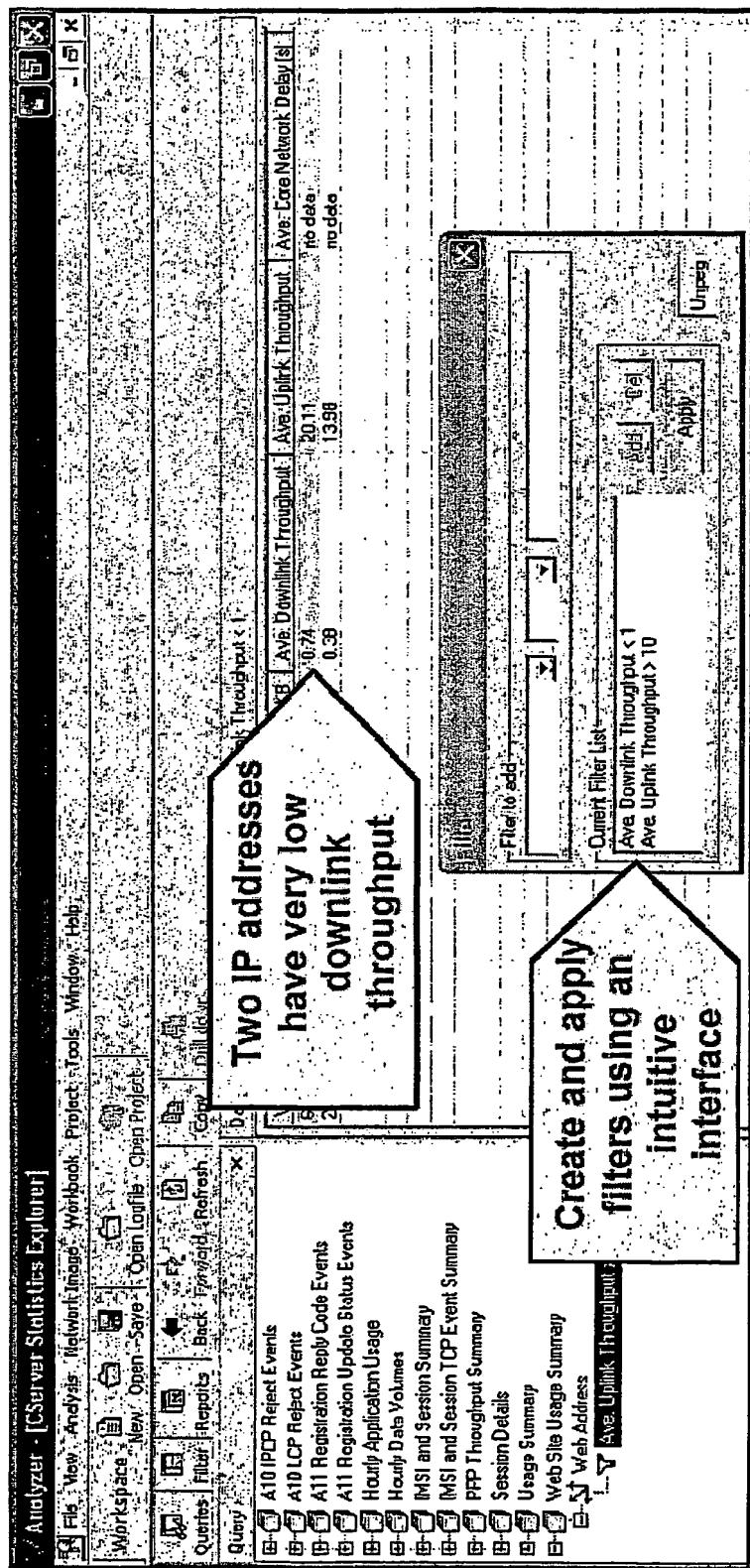


Figure 9

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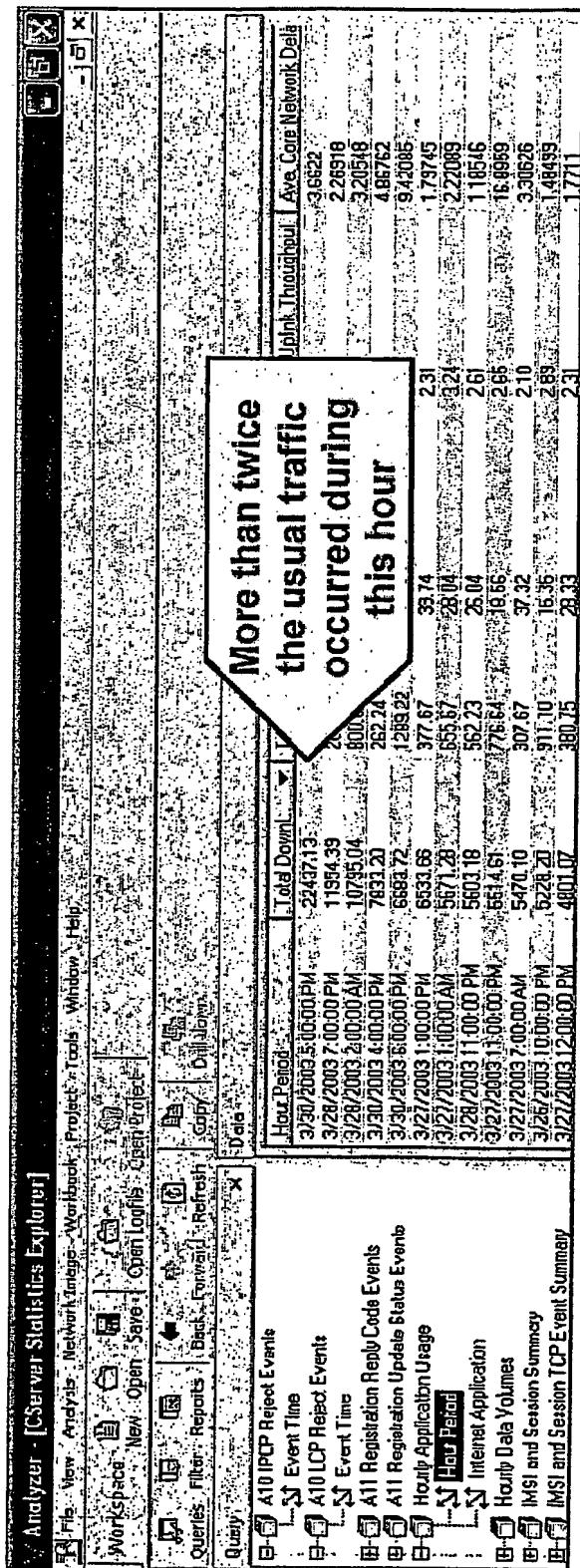
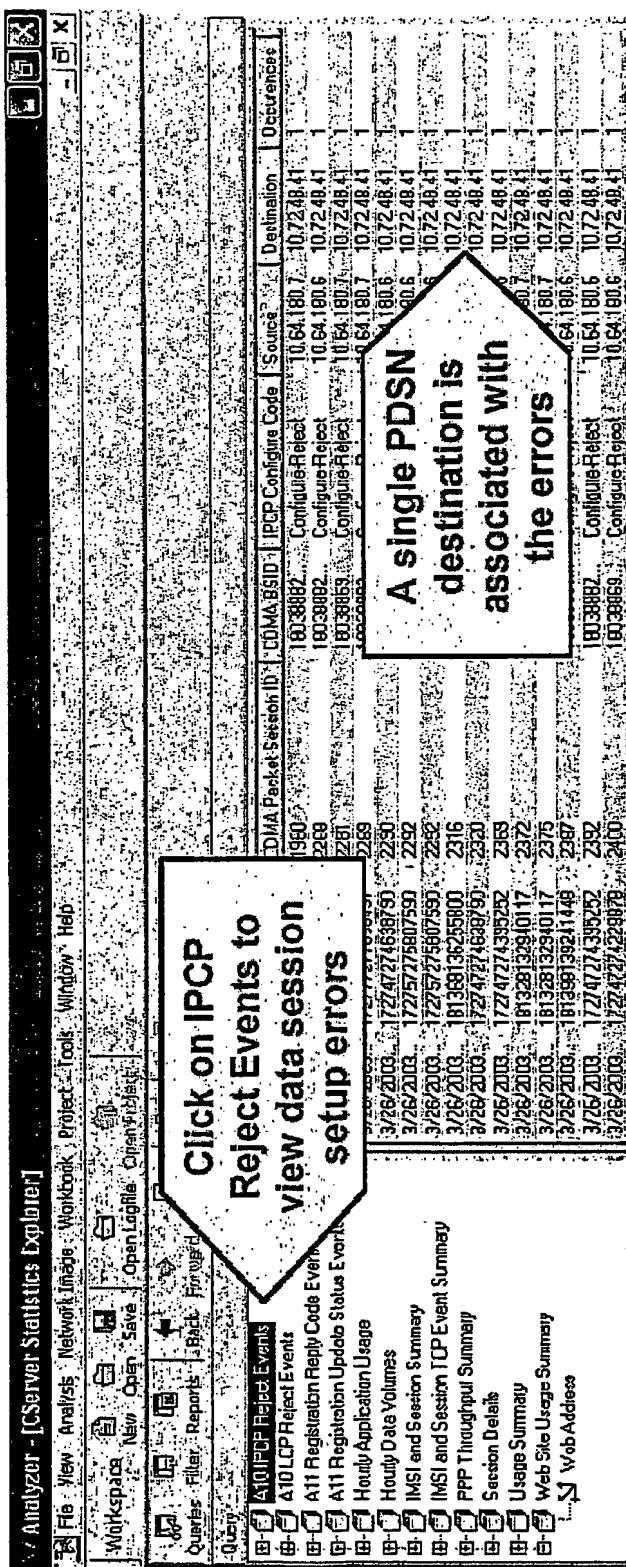


Figure 10

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Time	Originating Time	Packet Data Setup Time	PPP Setup Time	SCH Assignment Time	Total Setup Time
1:31:02 PM	1:31:01	127	1097	4001	10179
1:35:23 PM	21:02	141	1213	398	6359
2:02:52 PM	292	112	980	1121	10718
3:13:11 PM	51:02	202	2003	906	8913

Figure 12

Metric	Goal	Actual
Average Echo Loss	<14db or better	7.21
Average Forward FER	2% or less	1.49
Average Reverse FER	2% or less	2.10
% Access Failure	0%	10.71%
% Successful Calls Originating	>=90% for Mobile Originating or Mobile Terminating Calls	82.14%
% Dropped Calls (of calls that originated successfully)	2% or less	7.14%

Figure 13

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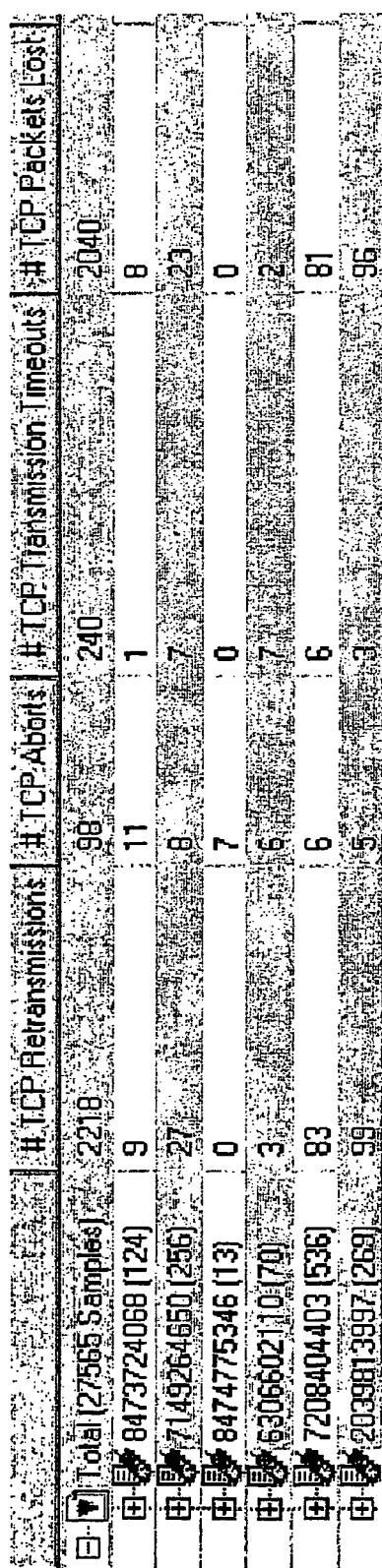


Figure 14

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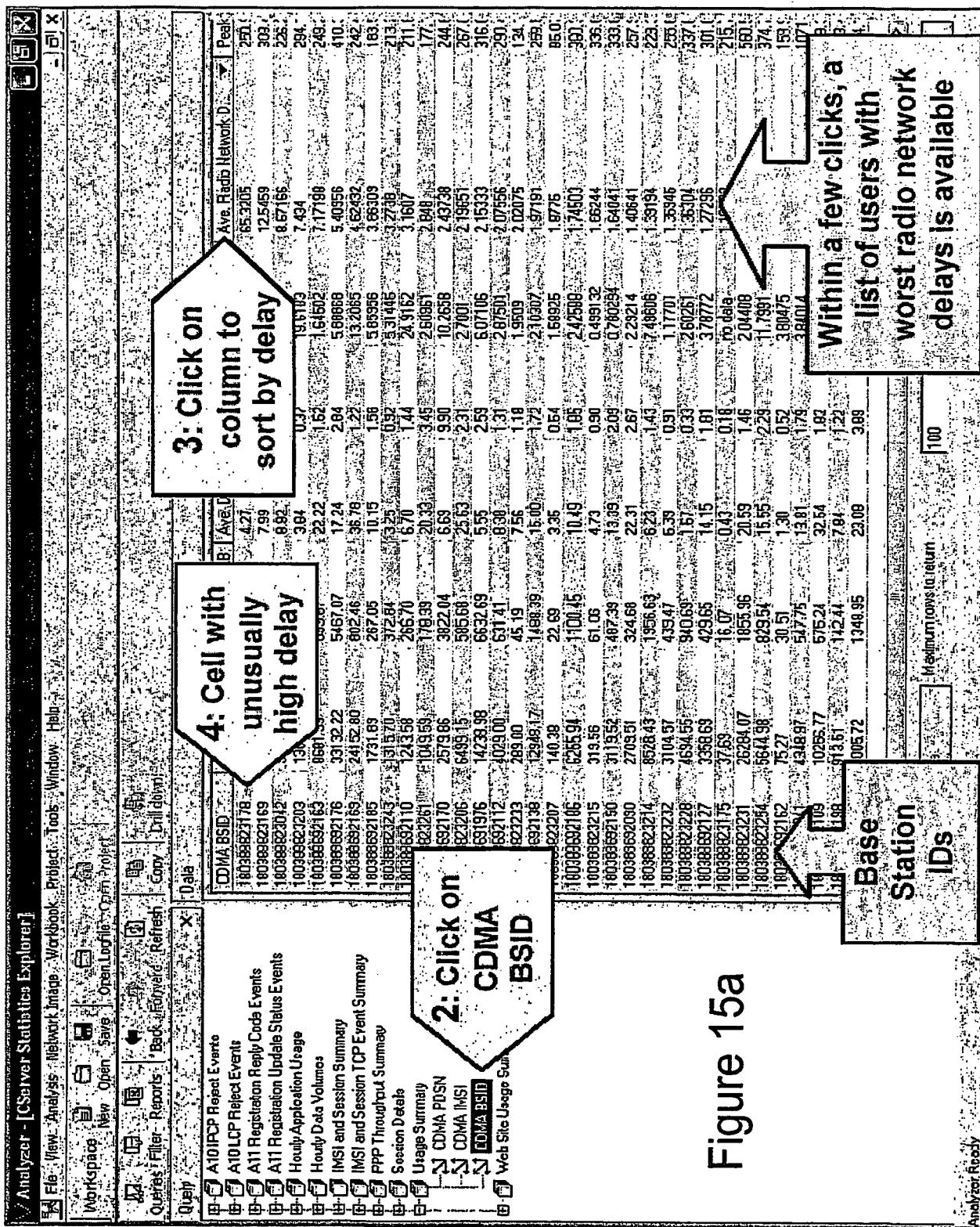


Figure 15a

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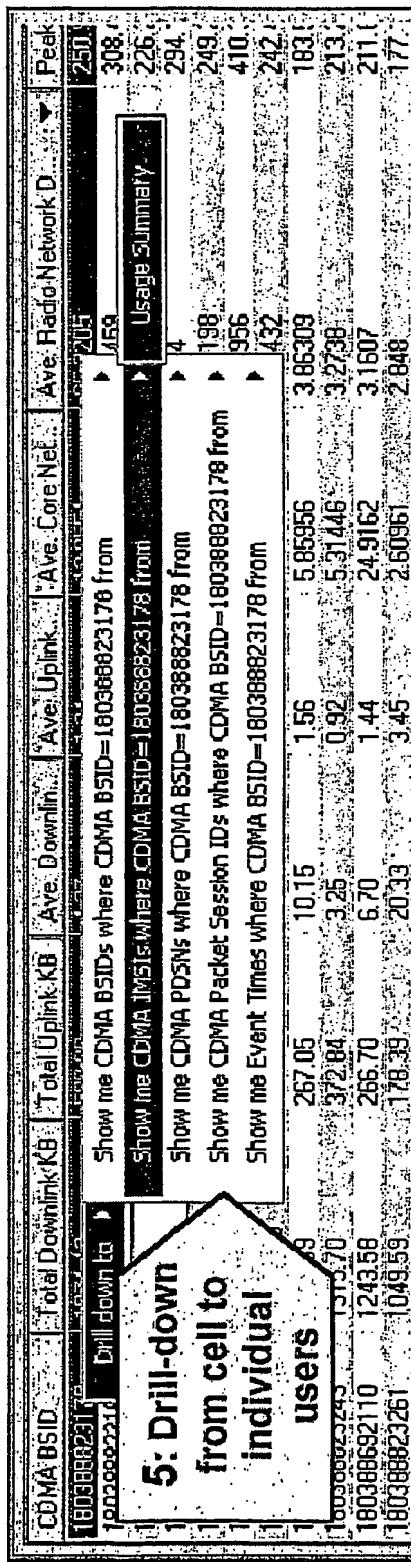


Figure 15b

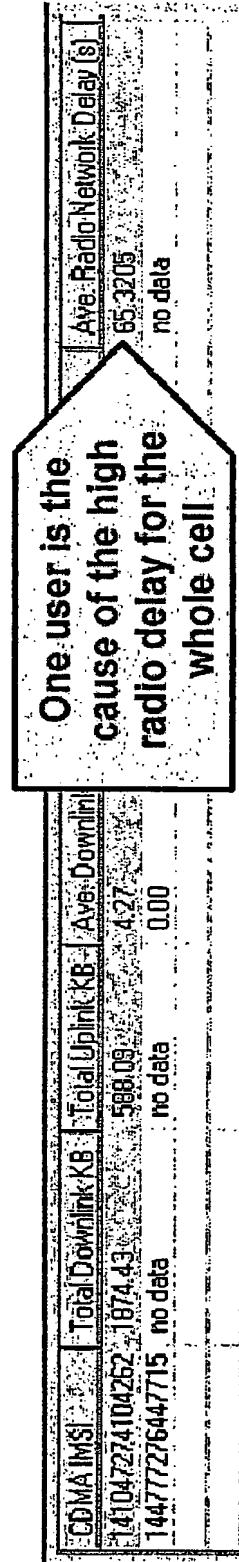


Figure 15c

17/20

CDM...	CDMA IMSI	CDMA BSID	Application	Ave. Core Network Delay [s]	Ave. Radio Network Del...	Occurrence
3192	172747274104262	180388823178	www+http	44.2309	138.04	2665
3889	172747274104262	180388823178	www+http	1.84581	36.431	4711
2266	172747274104262	180388823178	www+http	0.042	31.4905	2044
2526	172747274104262	180388823206	www+http	1.81822	2.61666	4659
2296	172747274104262	180388823178	www+http	1.36825	2.30018	3945
2760	172747274104262	180388823206	www+http	2.17648	1.86458	3224
2291	172747274104262	180388823178	pop3+http	no data	no data	119

Figure 15d

	MIP Registration Reply Code	IMSI	User ID
8-1	Total (42 Samples)		
8-1	9/11/2002 3:01 PM [2] Error code from the Foreign Agent - unknown challenge	5902093549	s00stein01@osp
8-1	9/11/2002 2:58:55 PM [2] Error code from the Foreign Agent - home agent port unreachable ([ICMP port received])	8474452681	snelson88@osp
8-1	9/11/2002 2:59:38 PM [4] Error code from the Foreign Agent - mobile node failed authentication	8474521587	mark2cool@osp
8-1	9/11/2002 3:00:43 PM [2] Error code from the Foreign Agent - unknown challenge	8475308339	jacobs65@osp
8-1	9/11/2002 3:00:42 PM [2] Error code from the Foreign Agent - mobile node failed authentication	3128990163	5D428890@hd
8-1	9/11/2002 3:00:42 PM [2] Error code from the Foreign Agent - unknown challenge	3128990163	5D428890@hc
8-1	9/11/2002 2:59:59 PM [2] Error code from the Foreign Agent - stale challenge	3123885627	dekker01@osp

Figure 16

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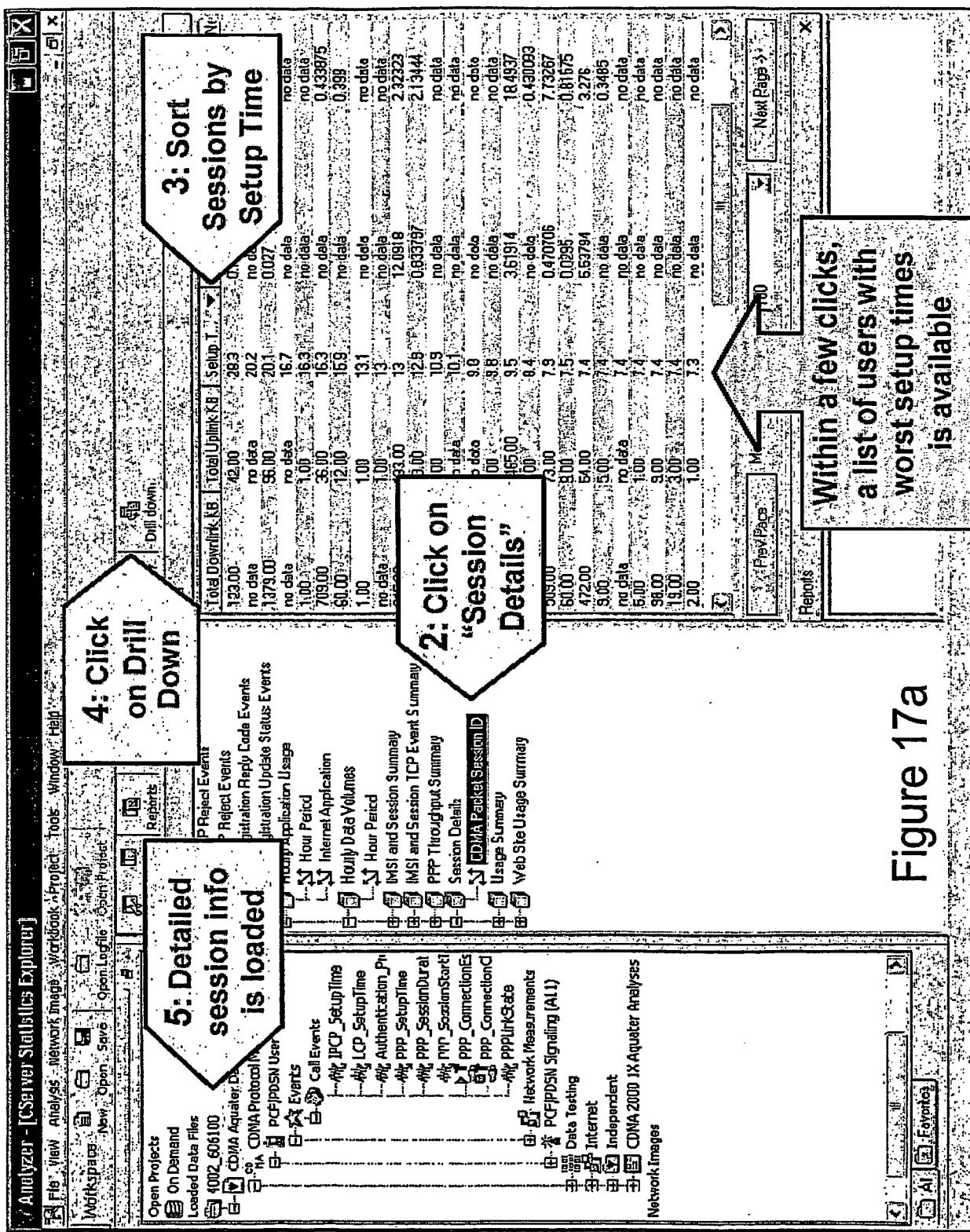


Figure 17a

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Relative	All State	PCF	PDSN	PPP	IP Application
00:00:00:000	A10 Connection Establishment Request				UDP
00:00:00:003	Dormant State				UDP
00:00:00:003	Dormant State				UDP
00:00:01:196	Dormant State				UDP
00:00:01:198	A10 Connect				UDP
00:00:03:004	A10 Connect				UDP
00:00:06:015	A10 Connect				UDP
00:00:09:026	A10 Connect				UDP
00:00:12:037	A10 Connect				UDP
00:00:15:047	A10 Connect				UDP
00:00:16:058	A10 Connect				UDP
00:00:21:059	A10 Connect				UDP
00:00:24:070	A10 Connect				UDP
00:00:24:304	A10 Connect				UDP
00:00:27:083	A10 Connect				UDP
00:00:27:085 A10 Connection Operational					
00:00:27:310	A10 Connection Operational				UDP
00:00:27:443	A10 Connection Operational				UDP
00:00:27:445	A10 Connection Operational				UDP
00:00:27:683	A10 Connection Operational				UDP
00:00:27:685	A10 Connection Operational				UDP
00:00:27:725	A10 Connection Operational				UDP
00:00:27:743	A10 Connection Operational				UDP
00:00:27:863	A10 Connection Operational				UDP
00:00:27:923	A10 Connection Operational				UDP
00:00:27:924	A10 Connection Operational				UDP
00:00:28:066	A10 Connection Operational				UDP
00:00:28:265	A10 Connection Operational				UDP
Protocol: LCP (49185)					
LCP Frame <small>hex</small>					
Code: LCP Configure-Reject (4) Identifier: 8 Length: 11 Configuration Option: 13					

Figure 17b

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Seq No.	Frame No.	Relative Time	Message Type	Offset	Relative Cause	Event
000052	12:28:57.008	00:01:41.059	000000 BCCH-SCH SystemInfoType1			
000053	12:28:57.008	00:01:41.058	000000 BCCH-SOH SystemInfoType1			
000059	12:29:01.512	00:01:44.512	003114 UL-CCCH RRCConnectionRequest		RRC registration	
000083	12:29:03.267	00:01:47.267	003115 UL-CCCH RRCConnectionRequest		RRC registration	
000087	12:29:03.598	00:01:47.628	000431 DL-CCCH RRCConnectionSetup			
000089	12:29:04.319	00:01:48.319	000620 UL-CCCH RRCConnectionSetupComplete			
000093	12:29:04.679	00:01:48.679	000361 UL-CCCH RadioBearerReleaseRequest			
000094	12:29:04.679	00:01:48.679	000000 UL-CCCH RadioBearerReleaseAccept		GPRS MM Attach request	
000095	12:29:04.959	00:01:49.959	00:02:30 DL-DCCH DownlinkDirectTransfer		GPRS MM Attach Accept	
000096	12:29:04.959	00:01:49.959	00:01:00 UL-DCCH UplinkDirectTransfer		GPRS MM Attach complete	
000097	12:29:04.959	00:01:49.959	00:01:10 UL-DCCH UplinkDirectTransfer		GPRS MM Attach complete	
000098	12:29:04.959	00:01:49.959	00:00:00 UL-DCCH UplinkDirectTransfer		GPRS MM Attach complete	
000112	12:29:07.974	00:01:51.974	00:02:05 UL-DCCH UplinkDirectTransfer		GPRS SM Activate PDP Context request	
000113	12:29:07.974	00:01:51.974	00:00:00 D-DCCH RadioBearerSetup		GPRS SM Activate PDP Context request	
000114	12:29:08.524	00:01:52.524	000640 D-DCCH RadioBearerSetupComplete			
000115	12:29:08.855	00:01:52.855	000641 UL-DCCH RadioBearerSetupComplete			
000120	12:29:08.835	00:01:52.835	000620 DL-DCCH MeasurementControl		GPRS SM Activate PDP Context accept	
000171	12:29:08.055	00:01:53.055	000220 DL-DCCH DownlinkDirectTransfer		GPRS SM Activate PDP Context accept	
000172	12:29:09.045	00:01:53.045	00:01:00 DL-DCCH MeasurementControl		GPRS SM Activate PDP Context accept	
000176	12:29:09.246	00:01:53.246	00:01:01 UL-DCCH MeasurementReport			
000171	12:29:10.377	00:01:54.377	001131 DL-DCCH RadioBearerReconfiguration			
000174	12:29:11.779	00:01:55.779	00:1402 UL-DCCH RadioBearerReconfigurationComplete			
000179	12:29:14.233	00:01:58.233	002154 UL-DCCH MeasurementReport			
000179	12:29:14.233	00:02:03.010	004777 UL-DCCH MeasurementReport			
000080	12:29:12.013	00:02:12.013	009003 UL-DCCH MeasurementReport			
000084	12:29:34.061	00:02:18.061	006483 UL-DCCH MeasurementReport			
000085	12:29:41.210	00:02:24.210	006449 UL-DCCH MeasurementReport			
000089	12:29:42.834	00:02:25.834	002624 UL-DCCH UplinkDirectTransfer		GPRS SM Deactivate PDP Context request	
000080	12:29:42.834	00:02:25.834	000000 D-DCCH RadioBearerSetup		GPRS SM Deactivate PDP Context accept	
000081	12:29:43.264	00:02:25.264	000620 DL-DCCH DownlinkDirectTransfer		GPRS SM Deactivate PDP Context accept	
000082	12:29:43.264	00:02:27.264	000000 UL-DCCH UplinkDirectTransfer		GPRS SM Deactivate PDP Context accept	
000084	12:29:43.264	00:02:27.264	000000 UL-DCCH UplinkDirectTransfer		GPRS SM Deactivate PDP Context accept	
000086	12:29:43.264	00:02:27.264	000000 UL-DCCH UplinkDirectTransfer		GPRS SM Deactivate PDP Context accept	
000087	12:29:43.485	00:02:27.485	000401 DL-DCCH RadioBearerRelease			
000087	12:29:43.675	00:02:27.675	000690 DL-DCCH DownlinkDirectTransfer			
000073	12:29:43.675	00:02:27.675	000000 UL-DCCH UplinkDirectTransfer		GPRS SM Deactivate PDP Context accept	
000083	12:29:44.937	00:02:28.937	001262 UL-DCCH RadioBearerReleaseComplete			
000079	12:29:45.237	00:02:29.237	000000 DL-DCCH RadioBearerReleaseComplete			
000080	12:29:45.237	00:02:29.237	000010 UL-DCCH RRCConnectionReleaseComplete			
000225	12:28:34.973	0000:24:12:144:31:75:41:56	UL-DCCH UplinkDirectTransfer			

UL-DCCH Message

- message: uplinkDirectTransfer

- on DomainIdentity: 0: HAC_PSM domain

GPRS SM Detach Request: GPRS Modify Management Msg Type: Detach request. Force to standby not indicated. Power Off: normal detach. Power On: forced attach (MS to MS) required)

E: Radio Cause P-TMSI signature 2: 11288839

GPRS MM - DETach Request

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